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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,653	12/30/2000	Ali N. Saleh	M-7165-6C US	8875

33031 7590 07/31/2003

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EXAMINER

NGUYEN, HANH N

ART UNIT	PAPER NUMBER
2662	9

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/751,653	SALEH ET AL.
	Examiner	Art Unit
	Hanh Nguyen	2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on Preliminary Amendment filed on 5/22/03.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 and 146-167 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,146-154,156-165 and 167 is/are rejected.
- 7) Claim(s) 155 and 166 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 05 July 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 147, 148, 149, 156, 158, 159, 160 and 167 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Morales** (US Pat. No. 5,987,526) in view of **Hamami** (US Pat. No. 5,959,972).

In claims 1, 156 and 167, **Morales** discloses, in Fig.1, a failed port 112 is coupled to a PVC 114 is detected (detecting of a port failure). A port 113 is selected as an alternate port (determining one alternate port) which is coupled to PVC 115. Packets previously sent from port 111 to port 112 via PVC 114 are now sent to port 113 via PVC 115 (restore virtual path to the second port). See col.5, lines 20-30. The network 110 can be used in an Optical network because interface 131 is complied with DS3/OC3 standard (Optical network). See col.5, lines 1-5. It is obvious to understand that virtual paths 114, 115 are within a transmission link. **Morales** does not disclose transferring a restoration message packet between the first node and the second node; and identifying the second port in response to the transferring. **Hamami** discloses that as a port failure is detected, one of the backup ports that detects the failure informs its peer port in another switch (transferring a restoration message between the first node and the second node). Controllers in the first and the second nodes sends acknowledgement to both backup ports to restore traffic over the backup link (identifying the second port in response to the transferring).

See col.6, line 60 to col.7, line 15. Since both **Morales** and **Hamami** teach detecting a port failure in a network, therefore; it would have been obvious to combine the **Hamami** with **Morales** by sending a restoration request from port 113 to a controller of the switch in the network 110 to restore the virtual path.

In claims 147, 148, 149, 158, 159 and 160, **Morales** discloses the time to restore the virtual path is 10 milliseconds (less than 2 second), between 50 milliseconds (50 milliseconds) and 250 milliseconds . See col.4, lines 15-30.

Claims 146, 150-154, 157 and 161-165 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Morales** (US Pat. No. 5,987,526) in view of **Hamami** (US Pat. No. 5,959,972), and further in view of **Bentall et al.** (US Pat. No. 6,282,170 B1).

In claims 146 and 157, **Morales** and **Hamami** discloses substantially limitations in claim 1, but updating information in a node database. **Bentall et al.** discloses, in Fig.7, database 74 that keep tracks of established virtual paths (updating information in a node database). See col.7, lines 5-10. Database 74 is within a node 70 (see Fig.5). Therefore, it would have been obvious to modify the **Morales** by adding database 74 of **Bentall et al.** so that all the available VPIs are updated and retrieved for backup in case of a port fails.

In claims 150 and 161, **Morales** does not disclose broadcasting resource request packets to nodes to determine an alternate route with necessary resources that support the virtual path. **Bentall et al.** discloses a SONET network network, in Fig.4, when a route has failed, spare capacity on each of alternate route is determined by sending messages along alternate routes (broadcasting resource request packets to nodes). One or more of alternate routes is selected and

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allocation of the spare capacity (identifying an alternate physical path comprising nodes with necessary resources to support the virtual path). Once the alternate route has been selected, network communication is presumed using the selected alternate route (configuring alternate physical path by establishing communication). See col.5, line 50 to col.6, line 5.

In claims 151 and 162, **Morales** discloses awaiting period of time before the rerouting is finished (waiting for a response to the path restoration request). See col.4, lines 1-5. **Morales** does not disclose changing the state of virtual path to restoring, identifying adjacent nodes with required bandwidth; and forwarding a path restoration request to the adjacent nodes. **Hamami** discloses, in Fig.2, switches 120 and 122 in ATM switches 1 and 2 respectively are closed to enable to proceed traffic over ports 36 and 44 (changing a state of VP to restoring). See col.7, lines 5-10. **Bentall et al.** discloses when a route has failed, a chooser node 64 (see Fig.2) in the vicinity of the failed route is selected (identifying adjacent nodes). Spare capacity on each of alternate routes is determined by sending messages along alternate routes (Forwarding a path resource request packets to nodes). See col.5, lines 50-67. Therefore, it would have been obvious to combine the **Bentall et al.**, **Hamami** with **Morales** in order to come up with the claimed limitations.

In claims 152 and 163, the limitations of these claims have been addressed in claims 147, 148 and 149.

In claims 153 and 164, **Morales** does not disclose if the response to the restoration request is not received within the second predetermined time interval, generating a network alarm. Generating an alarm after the second interval passes is well-known in communication network.

In claims 154 and 165, the limitations of these claims have been addressed in claim 1.

Allowable Subject Matter

Claims 155 and 166 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claims 155 and 166, the prior art does not disclose the first and the second time intervals are dynamically calculated by the optical network based on a network traffic condition.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hess (US Pat. No. 5,835,696) discloses Data Router Backup Feature.

Nederlof (US Pat. No. 5,590,118) discloses Method for Rerouting a Data Stream.

Chujo et al. (US Pat. No. 5,412,376) discloses Method for Structuring Communications Network Based on Asynchronous Transfer Mode.

. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday 8:30 AM - 5:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703 306-4744. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3988 for regular communications and 703 308-9051 for After Final communications.

Fax number: 703 872-9314

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Hanh Nguyen

A handwritten signature in black ink, appearing to read "Hanh Nguyen".

July 25, 2003